

BOSU® HIIT Extreme 2013

1. BOSU® HIIT Extreme Overview

A. Purpose

Learn the science of high intensity interval training and its application to fitness and sport. Take home a variety of short, plug-n-play high intensity interval sequences that are fun, realistic and effective for all participant ability levels.

B. HIIT Defined

High intensity interval training (HIIT) that uses relatively short, high intensity cardiovascular intervals that are alternated with less intense recovery intervals.

C. HIIT Energy System Essentials

1. VO2 max facts
2. Improving aerobic power
3. Lactate threshold (LT)
4. Oxygen dependent vs. independent energy production

D. HIIT: How Hard? How Long? How Often?

1. RPE: 7 – 10 (approx. 80%+ max heart rate)
2. 15 – 60 seconds intensity; 10 – 60 seconds recovery
3. HIIT workouts should not exceed 10 – 20% of total weekly volume

E. HIIT Benefits

1. Improves endurance more than continuous training alone
2. Improves ability to raise lactate threshold and VO2 max
3. Optimizes caloric expenditure and fat utilization

F. Progressing HIIT

1. Build endurance foundation first
2. Cardio effort increase = coordination, balance, stabilization decrease
3. Results are dependent on appropriate effort and recovery levels

G. BOSU HIIT Extreme Interval Types

1. Rolling Intervals
2. Surge Intervals
3. Short Burst Intervals

2. Effort Rating Scale (RPE): 7-10 = HIIT Zones

1	2	3	4	5	6	7	8	9	10
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2 - 3: Very easy; warm up/recovery/cool down level of effort

4 - 6: Moderate; aerobic steady state level of effort

7 - 9: Hard to very hard; aerobic lactate threshold level of effort

10 +: Maximal; anaerobic level of effort, crosses lactate threshold

Interval Type	Goal	Effort/Recovery Ratio	RPE	Protocol
ROLLING INTERVALS	Improve aerobic power up to LT; improve recovery ability; build interval training foundation	1:1:1 (HIIT hybrid)	5-6 6-7 8-9	3-minute sequence builds from moderate to hard to very hard in 1-minute increments; minute 1 of each sequence is the recovery segment for the previous interval

BOSU® HIIT Extreme Rolling Intervals

Minute 1 (RPE 5 - 6)	Minute 2 (RPE 6 - 7)	Minute 3 (RPE 8 - 9)
<p>1) Squat Lunge Combo Standing beside dome; ½ tempo Rear lunge Side squat Squat on top Side squat other side Repeat for 1 minute</p>	<p>Tempo Side rear lunge Side squat Jump stick on top Side squat other side Repeat for 1 minute</p>	<p>Jump lunge x 2 + Over the top Repeat for 1 minute</p>
<p>2) Plank Jack Combo Standing on floor behind PSU: Squat to plank Walk feet out/in slow Squat to stand Jump feet together Repeat for 1 minute</p>	<p>Squat to plank ½ tempo Tempo jack x 2 Slow pushup Squat to stand ½ time Jump feet together Repeat for 1 minute</p>	<p>Squat to plank ½ tempo Tempo jack x 2 Pushup fast x 2 Squat to stand ½ Tempo Jump feet together/raise BOSU overhead Repeat for 1 minute</p>
<p>3) Step-Up-Lunge Combo Stand in lunge position, 1 foot in center of dome, other leg in lunge w/knee on dome Step up 4 x R/Switch Step up 4 x L Repeat for 1 minute</p>	<p>Step up 2 x with jump Repeat for 1 minute</p>	<p>Alternating step up jumps Repeat for 1 minute</p>
<p>4) Straddle-Diagonal Lunge Combo Standing astride dome: Straddle up R/L – diagonal lunge back R Repeat L Repeat for 1 minute</p>	<p>Jump straddle up, step down R, diagonal lunge R Jump straddle up, step down L, diagonal lunge L Repeat for 1 minute</p>	<p>Jump up/jump down Jump diagonal lunge R Jump up/jump down Jump diagonal lunge L Repeat for 1 minute</p>

Interval Type	Goal	Effort/Recovery Ratio	RPE	Protocol
SURGE INTERVALS	Improve steady state max at LT, which results in an ability to work at a higher % of VO2 max and LT	1:1	8-9	60-second effort with a surge during the last 15-seconds; followed by a 60-second recovery using balance and core challenges

BOSU® HIIT Extreme Surge Intervals

Equipment: Balance Trainer = BT; Ballast Ball = BB; Med Ball = MB

Effort Interval	Balance/Core Recovery Interval
<p>1) Leap Frog Ballast Ball Slam (BT – BB) Stand behind BT holding BB. Jump up, stick landing. Slam BB on floor in front of BT. Leap Frog over. ½ turn jump. Repeat other direction</p> <p>Surge: Lift BB overhead, jump higher, slam harder</p>	<p>Stand on dome holding BB. Squat and rotate, touching the BB to floor beside the BT. Repeat to the other side</p> <ul style="list-style-type: none"> • Vary the intensity by adding an overhead lift
<p>2) Straddle Down Touch Down (BT-BB) Stand on BT holding BB. Jump straddle down, touch BB on BT, jump up/touch BB R/L side of BT</p> <p>Surge: Lift BB overhead, jump higher</p>	<p>BT PSU holding a plank with feet straddling the BB. Slowly walk feet up to BB</p> <ul style="list-style-type: none"> • Vary the intensity by jumping up and/or down
<p>3) Across the Dome Lateral Leap (BT) Standing beside the BT, lateral leap, lateral over the top</p> <p>Surge: Add two quick ski jumps to side + BIG over the top</p>	<p>Side lying balance with hands in a variety of positions</p> <ul style="list-style-type: none"> • Vary the intensity by holding a soft fitness ball in a variety of positions
<p>4) Side Squat Quick Feet (BT) Side Squat quick feet run 1-2-3 over the top laterally</p> <p>Surge: Jump side squat side to side</p>	<p>Stand Dome side performing a 1-legged balance while moving the Soft Fitness Ball in a variety of positions.</p> <ul style="list-style-type: none"> • Vary the intensity by visually tracking the ball

Interval Type	Goal	Effort/Recovery Ratio	RPE	Protocol
SHORT BURST INTERVALS	Improve power above LT, at VO2 max and at LT with all out efforts; improve ability to repeat hard efforts and recover quickly	2:1	9 – 10+	20-seconds all out effort followed by 10-seconds of complete recovery; one cycle = 4 minutes (repeat sequence of 4 drills 2x) OR 30-seconds all out effort followed by 15 seconds complete recovery; one cycle = 6 minutes (repeat sequence of 4 drills 2x)

BOSU® HIIT Extreme Short Burst Intervals

Equipment: Balance Trainer = BT; Ballast Ball = BB; Med Ball = MB

1) 20/10 Intervals (BT)	2) 20/10 Intervals (BT)
a. Quick switch jumps + leap up	a. 1-2-3 over the dome quick feet
b. Straddle tuck jumps	b. Knee hop/jump switch
c. Alt 1-legged jump stick/1-legged plank	c. PSU plank diagonal jumps
d. Alternating side power squat	d. Jump fwd/straddle jump touch/quick feet

3) 30/15 Intervals (BT - MB)	4) 30/15 Intervals (BT – MB)
a. Knee hop mountain climber switch	a. PSU burpie/jack/lift BT overhead
b. X-over fast runs	b. Bulgarian jump lunge
c. Forward jump straddle down/shuffle back	c. Freestyle jumps
d. Knee hop straddle down	d. Lateral leap + 2 runs (from behind)

Sequencing Options for Variety: a/b/c/d + a/b/c/d = 1 cycle
a/b + a/b + c/d + c/d = 1 cycle
a/a + b/b + c/c + d/d = 1 cycle
Mix and match to create endless options!

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